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# *HYDRAMARA ARGENTINA*, A DESCRIPTION OF ITS LARVA AND A REPORT ON ITS DISTRIBUTION (COLEOPTERA: HYDROPHILIDAE)

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*Abstract.*—The larva of the water scavenger beetle, *Hydramara argentina* (Knisch), is described, illustrated, and interpolated into the most recent key to hydrophilid larvae. The habitat of the adult and larva is noted, distribution data are listed, and the known range of the species is depicted on a map.

This species was described as *Hydrobius* (*Hydramara*) *argentina* by Knisch (1925) because it had some characters in common with members of the genus *Hydrobius*. However, it differed enough from *Hydrobius* that Knisch created a new subgenus, *Hydramara*, for it. D'Orchymont (1942) raised *Hydramara* to generic status, which it warrants both on adult and larval characters. The genus is presently known only from the single included species, *Hydramara argentina*. The adult is a large, distinctive hydrobiine hydrophilid which was described from seven specimens from Argentina (Mendoza Province; Punta del Agua and Tala).

*Hydramara argentina* is now known to occur in the provinces of Catamarca, Cordoba, Mendoza, San Luis, Salta, and Tucuman. The three adults and one larva in the National Museum of Natural History, Smithsonian Institution were collected in small montane streams by Dr. Oliver S. Flint, Jr., in October 1973. He found the specimens incidentally as he turned over rocks, driftwood, and similar debris in his search for larvae of Trichoptera.

Although I have had the larva, which I am confident is that of *H. argentina*, for almost six years, I deferred its description hoping that I could collect more larvae and confirm the identity by rearing. However, during recent fieldwork in southcentral Chile (Osorno Province) I failed to find *H. argentina* in mountain streams where I had hoped to find it. Instead, I was delighted to find an adult, larva, and pupa of an undescribed hydrobiine genus (Spangler, *in press*). Because I did not find additional specimens of *H. argentina*, I decided to describe the larva without further delay to help

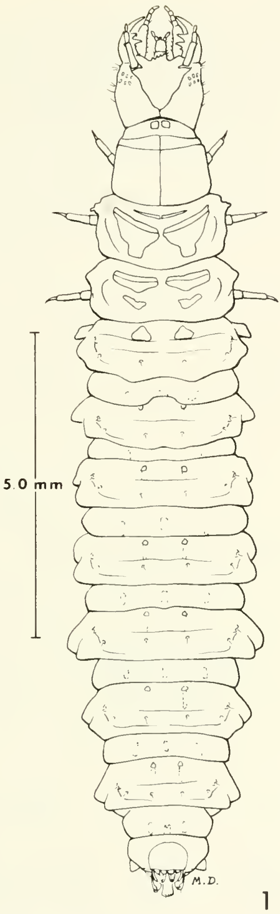
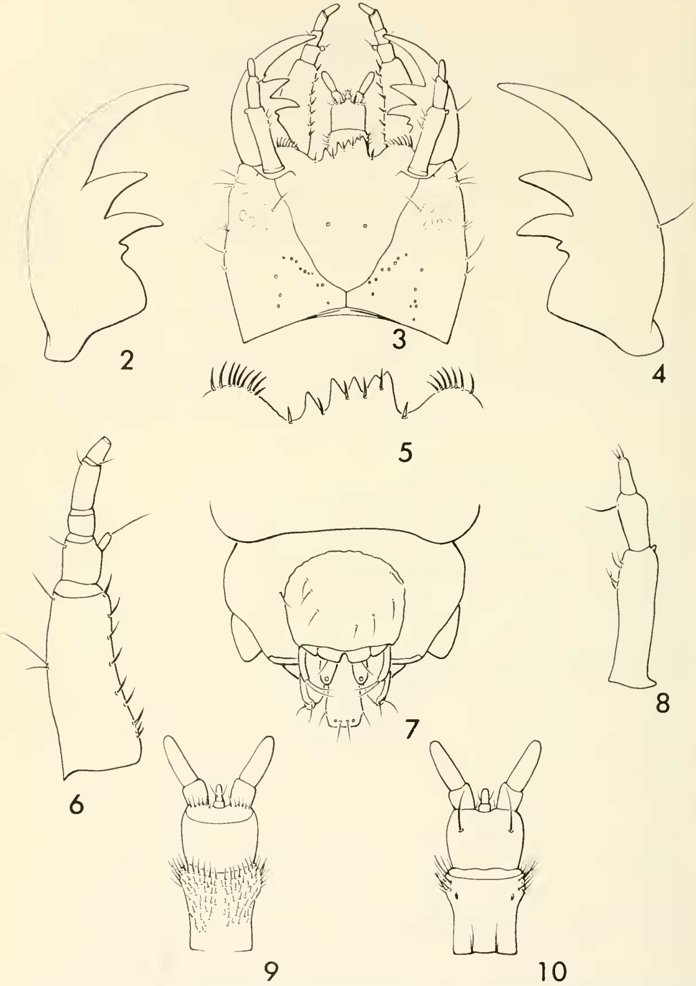


Fig. 1. *Hydramara argentina*, habitus view.

increase our knowledge of the poorly known larvae of the South American hydrophilid genera. Presently, larvae of 24 of the 40 known South American genera of hydrophilids remain to be described.

The larva described below has been identified by the elimination of known



Figs. 2–10. *Hydramara argentina*. 2, Left mandible, dv. 3, Head, dv. 4, Right mandible, dv. 5, Labroclypeus, dv. 6, Left maxilla, dv. 7, Stigmatic atrium, dv. 8, Antenna, dv. 9, Labium, dv. 10, Labium, vv. (dv = dorsal view; vv = ventral view.)

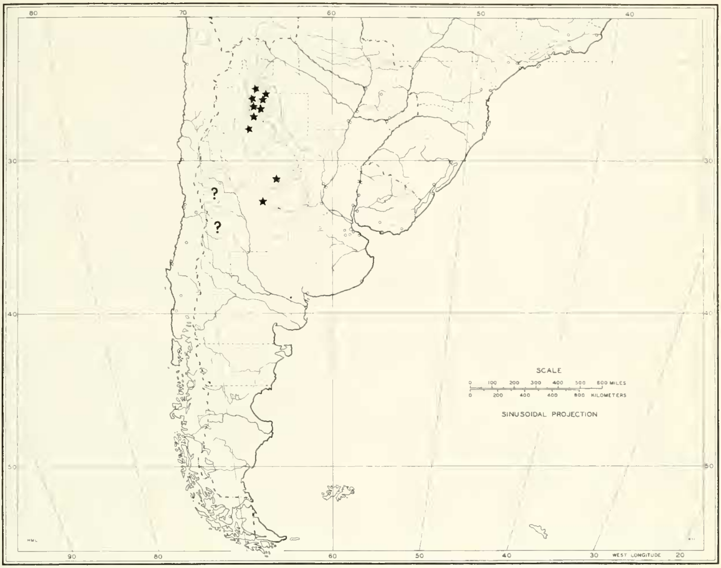


Fig. 11. *Hydramara argentina*, known distribution.

larvae of known genera, by its presence in the same biotopes as the adults of *H. argentina*, by the rarity of other hydrophilids in similar lotic habitats in Argentina, by the large size of the adults and the larva, and by its larval characters which place it near *Hydrobius* and related hydrobiine hydrophilids.

## Larva of *Hydramara argentina* (Knisch)
Figs. 1–11

Body elongate (Fig. 1). Total length, 13.5 mm; width of prothorax 1.3 mm. Color of integument light creamy yellow. Sclerotized head capsule, thoracic and abdominal sclerites, spiracles, legs, abdominal tubercles, and spiracular atrium testaceous. Integument covered dorsally with fine, whitish, branchialike setae; integument of abdominal segments with coarser, longer, testaceous setae interspersed among regularly arranged patches of short dark asperities.

Head (Fig. 3) quadrangular; 1.5 mm wide, 1.0 mm from labroclypeus to occipital foramen. Frontoclypeal suture feebly indicated. Frontal sutures united near base of head forming an epicranial suture. Frons sagittate. Cervical sclerites present, slightly trapezoidal. Ventral surface of head glabrous except 5 setae laterally at about midlength; 1 seta laterally near base of mandible, and 3 setae at midlength on each side of midline; with 2 deep, posterior tentorial pits medially, a short distance behind gula.

Labroclypeus (Fig. 5) prominent, asymmetrical. With 5 large, medial teeth; left tooth shortest and separated more widely from other four. Teeth of labroclypeus progressively longer from left to right side of head; each tooth separated from the next tooth by a stout yellow seta. Anterolateral projections of epistoma as long as shortest (left) tooth; both projections rounded anteriorly, each bearing 10 large, stout yellow setae apically.

Ocular areas each with 6 distinct ocelli arranged in an ellipse; anterior 3 ocelli slightly larger and closer together; posterior 3 ocelli smaller, ventrolateral one smallest and separated from posterior two.

Antenna (Fig. 8) moderately short, cylindrical, extending to base of 1st segment of maxillary palpus; 1st segment longest, 2× as long as penultimate segment; penultimate segment with small apicolateral tubercle and 2 long slender apicomedial setae; ultimate segment slender, parallel sided, about ½ as long as penultimate, bearing a slender distal seta and a minute apicolateral appendage.

Mandible (Figs. 2, 4) symmetrical, prominent, stout, sharply pointed apically; each with 2 large well-defined medial and 1 small, basal inner teeth; molar area rounded.

Maxilla (Fig. 6) with stipes stout, elongate, tapering distally, bearing a row of 7 stout setae on inner margin and 3 long slender yellow setae laterally and 3 more ventrolaterally before midlength. Palpifer segmentlike; with slender sclerotized appendage on apicomedial angle about ⅓ as long as palpifer; bearing 1 long apical seta ventrolaterally; appendage of palpifer bearing an apical seta. Palpus tapering distally; 1st segment short, slightly more than ½ as long as palpifer; penultimate segment longest, slightly more than 2× as long as basal segment, bearing 1 long slender lateral seta at about apical ⅓; ultimate segment conical, about ½ as long as penultimate segment.

Labium (Figs. 9, 10) extending about to midlength of stipes. Penultimate segment of palpus short and broad; ultimate segment 3× as long as penultimate segment. Ligula distinct, short, about ¾ as long as basal segment of labial palpus, bearing a long basal seta at each lateral corner dorsally. Mentum quadrangular, glabrous dorsally except numerous setae apically on membranous area; ventrally glabrous except apicolateral corners each with 1 long seta. Submentum apically slightly wider than mentum, narrowed medially, wide posteriorly, dorsal surface spinose; with numerous long stout setae apicolaterally; ventral surface glabrous except long apicolateral setae.

Gula pentagonal, rounded posteromedially.

Prothorax with sides nearly straight but diverging posteriorly; posterolateral angles broadly rounded, with a few short setae; anterolateral angles each with a few long setae and a few short setae; sagittal line present. Prosternal sclerite large, subrectangular, with no indication of sagittal line.

Mesothorax wider than prothorax and almost as long (measured on midline) as prothorax; with 2 very narrow, straplike, anterior sclerites and 2 large, subtriangular mesotergal sclerites; margins apicolaterally each with an elongated spiracular tubercle followed by a setiferous lobe; sagittal line present.

Metathorax slightly wider than and slightly shorter than mesothorax; anterior metatergal sclerites transverse, larger than posterior sclerites, and roughly elliptical; posterior sclerites small and narrow, each sclerite with a seta-bearing tubercle at each corner; sagittal line present.

Legs 4-segmented; procoxae large, separated by about length of a trochanter; trochanter about as long as femur (viewed ventrally); femur about as long as tibiotarsus; tarsal claw single, with two stout robust setae ventrally at basal ⅓.

Abdomen of 8 distinct segments, 9th and 10th segments reduced; 1st abdominal segment with 2 moderately large anterior sclerites; remaining segments also with sclerites but each becoming increasingly smaller; terga similar to each other. True segmentation obscured by additional transverse folds on segments, segmented folds continued onto sternum. Each segment with 4 folds; anterior fold with 3 patches of asperities, 2nd fold with 2 patches of asperities, 3rd fold with 4 tubercles each surrounded with minute asperities and each with a long seta apically; 4th fold without patches of asperities or tubercles. A large spiracular tubercle present laterally between 2nd and 3rd folds on abdominal segments 1–7. Epipleurites and hypopleurites prominently lobed. Eighth tergum represented by superior valve of stigmatic atrium (Fig. 7), beneath which lies the 8th pair of abdominal spiracles. Ninth tergum trilobed; middle lobe large, with 4 short, stout setae, 1 seta on each side of median line on caudal margin, and 1 seta on apicolateral angles; lateral lobes smaller, about ⅔ as wide as median lobe, each bearing 1 dorsal and 2 ventral setae on caudal margin.

The single larva described above came from: ARGENTINA, Salta Province, Cañada la Gotera, Rt. 59, km 23.5, 16–17 Oct. 1973, O. S. Flint, Jr., deposited in the National Museum of Natural History, Smithsonian Institution.

The larva of *Hydramara argentina* traces to *Hydrobius* in couplet 29 in Bertrand's (1972:264) generic key to hydrophilid larvae. However, *Hydramara* may be distinguished from *Hydrobius* by interpolating the following couplet there.

29a Ligula long, 2× as long as basal segment of labial palpus . . . . . . . . . . .

........................................... *Hydramara* Knisch
Ligula short, about ¾ as long as basal segment of labial palpus ..........
........................................... *Hydrobius* Leach

## Known Distribution

The description of the larva of *Hydramara argentina* above provided this opportunity to report the distribution data based on adults, as well as the larva, which I have accumulated during the past 10 years. It is obvious from the following data that the species is not common in collections. However, I believe this reflects a limited amount of collecting within the range of the species just as the concentration of records on the map (Fig. 11) in the Tucuman area reflects greater collecting activity by the entomological staff and visitors to the Instituto Miguel Lillo in Tucuman. The distribution data suggest that the species occurs primarily in montane habitats. In several instances, on old specimens, provinces only were given on specimen labels. In these cases, a question mark was used in the province to indicate a province record but without more specific locality indicated. Also, d'Orchymont (1942) reported a specimen of *Hydramara argentina* from Paraguay but I consider this record doubtful and, therefore, have not included it on the map. The 13 specimens seen are in the following institutions: Instituto Miguel Lillo, Tucuman, Argentina (IML); Museo de la Plata, La Plata, Argentina (MLP); and the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM). In addition, I have included the seven specimens Knisch mentioned when he described this taxon but I have not seen his type-material.

Specimens examined (13).—ARGENTINA: Catamarca: El Rodeo, 18–19 Oct. 1973, O. S. Flint, Jr., 1 (USNM). Cordoba: Apr. 1928, J. M. Bosq, 2 (MLP). Mendoza: Punta del Agua, and Tala, 7 (fide Knisch, 1925). Salta: Angastaco, 12 Oct. 1973, O. S. Flint, Jr., 1 (USNM); Cafayate, 1944, K. J. Hayward, 3 (IML); Cañada la Gotera, Rt. 59, km 23.5, 16–17 Oct. 1973, O. S. Flint, Jr., 1 larva (USNM); Depto. Rosario de la Frontera, El Morenillo, Mar. 1936, 1 (IML); La Zanja, west of Chicoana, 13 Oct. 1973, O. S. Flint, Jr., 1 (USNM). San Luis: Merlo, 24–27 Jan. 1958, Willink and Tomsic, 1 (IML). Tucuman: Horco Molle, 22 Dec. 1965, L. Strange, 1 (IML); Tipas, J. M. Bosq, 1 (MLP).

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